

NOTES ON NEW AND NOTEWORTHY PLANTS. IX

Harold N. Moldenke

ALOYSIA BRASILIENSIS Moldenke, sp. nov.

Frutex; ramis virgatis subsimplicibus valde breviterque brunneo-pubescentibus; internodiis valde abbreviatis; foliis ternatis numerosissimis adscendentibus imbricatis; petiolis 1 mm. longis vel subobsoletis dense pilosis; laminis firme chartaceis ellipticis argute acutis, ad basin rotundatis, integerrimis valde revolutis, supra scaberrimis, subtus leviter puberulis et resinoso-granulosis; inflorescentiis axillaribus.

Shrub; stems apparently virgate and almost simple, abundantly short-pubescent with brownish hairs; nodes not annulate; principal internodes much abbreviated, 5--15 mm. long; leaves ternate, very numerous, ascending, overlapping; petioles 1 mm. long or subobsolete, densely pilose; blades firmly chartaceous, rather uniformly light-green on both surfaces, elliptic, 2--3 cm. long, 6--13 mm. wide, sharply acute at the apex, rounded at the base, entire and decidedly revolute along the margins, very scabrous above, finely puberulent and resinous-granular beneath; midrib slender, deeply impressed above, very prominent and densely short-pubescent beneath; secondaries slender, 5--7 per side, spreading or slightly ascending, not arcuate, impressed above, very prominent beneath; veinlet reticulation usually obscure above, rather conspicuous beneath; inflorescence axillary, sparse, about 9 cm. long, about 1 cm. wide in anthesis, densely many-flowered; peduncles very slender, about 2 cm. long, very densely pubescent with brownish hairs; rachis elongate, slender, very densely pubescent like the peduncle; bractlets lanceolate, about 1.5 mm. long, attenuate-acute or subacuminate at the apex, densely short-pubescent; calyx irregular, about 4 mm. long, very densely spreading-hirsute at the base and to about the middle, spreading-pubescent at the apex, the teeth very unequal; corolla-tube about 4 mm. long, finely puberulent on the outer surface, the limb about 3 mm. wide, puberulent on the outer surface, 2-lipped.

The type of this species was collected by Per Karl Hjalmar Dusén somewhere in Paraná, Brazil, on January 4, 1904, and is no. 46798 in the herbarium of the Museu Nacional at Rio de Janeiro. The species is obviously related to *A. polygalaeifolia* Cham.

ERIOCAULON HUMILE Moldenke, sp. nov.

Herba acaulescens; foliis caespitosis rosulatis linearibus membranaceis utrinque uniforme viridibus glabrisque acutis basin versus inconspicue fenestratis; vaginis arctiuscule adpressis glabris saepe conspicue tortis, ad apicem oblicue fissis; pedunculis numerosis gracillimis stramineis tricostatis valde tortis glabris; capitulis parvis griseo-stramineis hemisphaericis; bracteis involucri paucis ellipticis stramine-

is attenuato-acutis vel subacuminatis glabris nitidis.

Acaulescent herb; leaves basal, rosulate, linear, membranous, uniformly green on both surfaces, dull, 2--4 cm. long, about 1 mm. or less wide at the mid-point, acute at the apex, somewhat inconspicuously fenestrate toward the base, glabrous on both surfaces, the venation obscure; sheaths rather close, about 1.5 cm. long, often conspicuously twisted, glabrous, obliquely split at the apex, the blade short, usually erect, subacute or blunt at the apex; peduncles numerous, 7--30 per plant, very slender, stramineous, 3--13.5 cm. long, 3-costate, much twisted, glabrous; heads small, grayish-stramineous, hemispheric, 2--3 mm. in diameter; involucrel bractlets rather few, elliptic, stramineous, about 2 mm. long and 0.7 mm. wide, attenuate-acute or subacuminate at the apex, glabrous and shiny; receptacle long-villous; receptacular bractlets obovate, whitish-subhyaline, about 1.4 mm. long and 0.5 mm. wide, concave-cucullate, abruptly subacuminate at the apex, glabrous; staminate florets: sepals 2, oblanceolate, hyaline, about 0.8 mm. long and 0.2 mm. wide, abruptly short-acuminate at the apex, glabrous; petal-tube about 0.7 mm. long, very slender; stamens 4; anthers brown, small; pistillate florets: sepals 3, free, hyaline, oblanceolate, about 1.3 mm. long and 0.4 mm. wide, sharply acute at the apex, pilose on the back toward the apex; petals 3, free, hyaline, narrowly oblong, about 1.5 mm. long and 0.4 mm. wide, sharply attenuate-acute at the apex, sparsely pilose on the upper half of the back; ovary subglobose, about 0.5 mm. long and wide, glabrous, 3-sulcate, 3-celled, 3-ovulate; style about 0.4 mm. long, glabrous; stigmas 3, about 0.4 mm. long.

The type of this little species was collected by Blatter, Hallberg, and McCann (no. 28009, in part) at Khandala, Bombay, India, in October, 1918, and is deposited in the Britton Herbarium at the New York Botanical Garden.

ERIOCAULON INDICUM Moldenke, sp. nov.

Herba acaulescens; foliis parvis paucis vel nullis grainoidis rectis tenuiter membranaceis multinervatis utrinque viridibus glabrisque non fenestratis; vaginis per laxis foliaceis conspicuis viridibus tenuiter membranaceis glabris, usque ad $3/4$ longitudinis fissis, lamina rectis foliaceis glabris acutis vel attenuato-acuminatis; pedunculis numerosis tricostatis in siccitate complanatis paulo tortis glabris; capitulis conicis griseis; bracteolis numerosissimis perconspicuis atrobrunneis angulato-obovatis carinatis umbonaticucullatis apiculatis extus supra mediam farinosis.

Acaulescent herb; leaves basal, apparently very few or even absent, grass-like, uniformly bright-green on both surfaces, erect, thin-membranous, 13--14 cm. long, many-nerved, not plainly fenestrate, acute at the apex, glabrous on both surfaces; sheaths very lax, foliaceous and conspicuous, 10--13 cm. long, thin-membranous, glabrous, obliquely split at about $3/4$ of its length and prolonged into an erect, foliaceous, acute or attenuate-acuminate, glabrous blade; peduncles 12 or

more per plant, 10--14 cm. long, 3-costate, flattened in drying, very slightly twisted, glabrous; heads conic, gray, 5--8 mm. long and wide; involucreal bractlets similar to the receptacular ones but slightly broader and blunter; receptacular bractlets very numerous and conspicuous, dark-brown (except at the base), angular-ovate, about 1.9 mm. long and 1.7 mm. wide, keeled transversely at the widest part and slightly umbonate on the back, cucullate, apiculate at the apex, farinose above the keel on the back, otherwise glabrous; staminate florets: sepals 3, free, oblanceolate, brownish, about 1.5 mm. long and 0.4 mm. wide, obtuse at the apex, very minutely ciliate at the apex; petals 3, united into a stramineous membranous tube about 1.3 mm. long, 3-lobed at the apex, the lobes narrow-attenuate, hyaline, with a black gland below the apex and a small erect tuft of hair at the apex; stamens 6; pistillate florets: sepals 3, filiform, free, hyaline, about 1.3 mm. long, glabrous; petals 3, free, filiform, hyaline, about 1.3 mm. long, densely long-villous from near the base to the apex; pistil 1.7--2 mm. long, glabrous; ovary 3-celled, 3-sulcate, 3-ovulate, glabrous.

The type of this very distinct species was collected by H. Santapau (no. 2924) at Khandala, on the Kuve Plateau, Bombay, India, on October 4, 1943, and is deposited in the Britton Herbarium at the New York Botanical Garden.

ERIOCAULON LANCEOLATUM var. *PILOSUM* Moldenke, var. nov.

Hæc varietas a forma typica speciei pedunculis dense patentibus pilosis vel villosis recedit.

This variety differs from the typical form of the species in having the peduncles densely spreading-pilose or villous.

The type was collected by H. Santapau (no. 2182) in rock pools at Khandala, Bombay, India, on September 5, 1941, and is deposited in the herbarium of St. Xavier's College at Fort, Bombay.

ERIOCAULON MEIKLEI Moldenke, sp. nov.

Herba acaulescens; foliis basalibus rosulatis graminoideis membranaceis multinerviis fenestratis subacutis utrinque glabris viridibusque; vaginis arctiuscule adpressis non tortis indistincte nervosis præter basin glabris oblique fissis; pedunculis filiformibus 5 vel 6 stramineis tricostatis paulo tortis glabris; capitulis parvis stramineis hemisphaericis paucifloris; bracteolis involucri paucis stramineis ellipticis acutis nitidis glabris.

Acaulescent herb; leaves basal, rosulate, about 2 cm. long, grass-like, uniformly bright-green on both surfaces, membranous, many-nerved, fenestrate, subacute at the apex, glabrous on both surfaces; sheaths rather close, 1--1.5 cm. long, not twisted, indistinctly nerved, glabrous except for the slightly pilosulous or puberulous base, obliquely split at the apex, the blade very short, erect, appressed; peduncles filiform, 5 or 6 per plant, 2--6 cm. long, stramineous, 3-costate, slightly twisted, glabrous; heads small, stramineous, hemispheric,

2--4.5 mm. wide, few-flowered; involucre bractlets few, stramineous, shiny, elliptic, about 2.5 mm. long and 1 mm. wide, acute at the apex, glabrous; receptacle rather densely long-villous; receptacular bractlets dark-brown, broadly elliptic, about 3 mm. long and 1 mm. wide, narrowed to the base, long attenuate-acuminate at the apex, glabrous; staminate florets: sepals 3, brown, lanceolate, about 1.3 mm. long and 0.4 mm. wide, regularly narrowed to the base and apex, glabrous; corolla white, too immature for accurate description; pistillate florets not seen.

The type of this diminutive species was collected by Th. Monod (no. 3) at Vallon du Balasoko, Parc Institut Francaise d'Afrique Noire, Banako-Loulouba, Senegal, Africa, on December 9, 1948, and is deposited in the herb. of the Mus. Nat. d'Hist. Naturelle at Paris. It was examined at Kew by R. D. Meikle -- in whose honor it is named -- who reports "Eriocaulon sp., not matched". It is hoped that more mature material may soon become available so that the description may be completed.

ERIOCAULON MONODII Moldenke, sp. nov.

Acaulescent herb; leaves basal, rather few, rosulate, grass-like, erect or ascending, membranous, bright-green above, slightly lighter beneath, 3.5--6.5 cm. long, 3--4 mm. wide at the mid-point, acute or subacute at the apex, inconspicuously fenestrate toward the base, glabrous on both surfaces; sheaths rather lax, 2.5--3 cm. long, not twisted, glabrous, inconspicuously veined, obliquely split at the apex, the blade short, erect, blunt or acute; peduncles very slender, numerous, 12 or more per plant, stramineous, 6--14 cm. long, 4-costate, hardly at all or very slightly twisted, glabrous; heads whitish, hemispheric, 4--7 mm. wide; involucre bractlets few, stramineous, elliptic, about 2.5 mm. long and 1 mm. wide, acute at the apex, glabrous and shiny; receptacle densely long-villous; receptacular bractlets numerous, conspicuous, black (except the very base), obovate, more or less concave-cucullate, about 2 mm. long and 0.9 mm. wide, abruptly short-acuminate at the apex, short-pilose with white hairs toward the apex on the back; staminate florets: sepals 3, dark-brown, free, obovate, about 1.5 mm. long and 0.4 mm. wide, rounded and often erose at the apex, glabrous; petals 3, united into a very slender white tube about 1 mm. long, the 3 lobes divergent and about 0.6 mm. long; stamens 6; anthers small, light-brown; pistillate florets: sepals 3, free, brown, narrow-elliptic or oblong, about 1.2 mm. long and 0.4 mm. wide, subacute at the apex, glabrous except for a very few short whitish hairs at the very apex on the back; petals 3, free, hyaline, oblong-oblancheolate, about 1.7 mm. long and 0.3 mm. wide, obtuse at the apex, glabrous except for the slightly white-pilose apex; ovary subglobose, about 0.4 mm. long and wide, glabrous, 3-celled, 3-sulcate, 3-ovulate; style white, about 0.8 mm. long, glabrous; stigmas 3, about 0.2 mm. long.

The type of this species was collected by Th. Monod (no. 1) -- in whose honor it is named -- at Vallon du Balasoko, Parc

Institut Francaise d'Afrique Noir, Bamako-Koulouba, Senegal, Africa, on December 9, 1948, and is deposited in the Britton Herbarium at the New York Botanical Garden. It was kindly examined by R. D. Meikle at Kew, who reports that it is an "Eriocaulon sp. near E. Afzeliannum Wikstr. ex Koernicke, but capitula larger, florets smaller, petals subequal."

ERIOCAULON PARANENSE Moldenke, sp. nov.

Herba acaulescens; foliis rosulatis graminoides multinervis utrinque atroviridibus glabratisque, basin versus fenestratis, ad apicem obtusis et tubuloso-cucullatis; vaginis per laxis elongatis multistriatis paulo tortis glabris, ad apicem fissis bifidis; pedunculis ca. 5 crassiusculis rigidis 9-costatis tortis glabris; capitulis hemisphaericis albidis; bracteolis involucri fuscis valde concavis ellipticis firmis acutis glabris; receptaculo longe villosa.

Acaulescent herb; leaves basal, rosulate, grass-like, uniformly dark-green on both surfaces, 2--5 cm. long, about 4 mm. wide at the mid-point, many-nerved, fenestrate toward the base, glabrate on both surfaces, dull, obtuse and often tubular-cucullate at the apex in pore-like fashion; sheaths far surpassing the leaves, very lax, 10--12 cm. long, many-striate, slightly twisted, glabrous, obliquely bifid and split at the apex; peduncles about 5 per plant, rather stout, stiff, 42--65 cm. long, 9-angled, glabrous, twisted; heads hemispheric, about 1.5 cm. in diameter, whitish; involucrel bractlets dark-brown, pronouncedly concave, elliptic, firm-textured, about 3.5 mm. long and 2 mm. wide, acute at the apex, glabrous; receptacle long-villous; receptacular bractlets obovate, concave-arched, about 3.5 mm. long and 1.5 mm. wide, brown, long-acuminate at the apex, cuneate-narrowed to the base, very minutely ciliolate-margined, otherwise glabrous; staminate florets: sepals 3, free, brownish, oblong-obovate, cucullate-concave, about 1.7 mm. long and 0.8 mm. wide, glabrous except for the densely white-barbellate apex; petals 3, free, linear, white, very unequal, one about 1.9 mm. long and very densely villous in barbellate fashion from near the base to the apex, the other 2 only 0.8 mm. long and sparsely short-barbellate at the apex only; stamens 6; anthers dark-brown or black; pistillate florets: sepals 3, subhyaline, narrowly oblong, about 2.1 mm. long and 0.4 mm. wide, free, two glabrous, the third barbellate at the apex; petals 3, about 1.3 mm. long and 0.4 mm. wide, densely villous on the back and barbellate at the apex; pistil apparently rudimentary.

The type of this species was collected by Günter Tessmann (no. 2751) in wet places at Florestal, 29 km. east of Curitiba, on the road from Curitiba to Paranagua, at an altitude of 930 m., Paraná, Brazil, on December 13, 1947, and is deposited in the Britton Herbarium at the New York Botanical Garden.

ERIOCAULON SANTAPAU Moldenke, sp. nov.

Herba acaulescens; foliis rosulatis graminoides membranaceis acutis utrinque glabris indistincte multinervis non fen-

estratis; vaginis laxiusculis viridibus glabris non tortis, indistincte nervatis, ad apicem oblique fissis; pedunculis mucrosissimis gracilibus stramineis 4-costatis glabris; capitulis parvis stramineis hemisphaericis; bracteolis involucri paucis ellipticis stramineis obtusis glabris.

Acaulescent herb; leaves basal, rosulate, grass-like, membranous, about 4 cm. long, about 3 mm. wide at the mid-point, acute at the apex, not fenestrate, glabrous on both surfaces, indistinctly many-nerved; sheaths rather lax, green, 1.8--2.8 cm. long, not twisted, glabrous, indistinctly nerved, obliquely split at the apex, the blade short, blunt; peduncles about 50 per plant, slender, stramineous, 4-costate, 8--20 cm. long, glabrous; heads small, stramineous, hemispheric, 2.5--3 mm. in diameter; involucrel bractlets few, elliptic, about 2 mm. long and 1 mm. wide, stramineous, obtuse at apex, glabrous; receptacle densely long-villous; receptacular bractlets brownish, obovate, somewhat concave-cucullate, about 1.3 mm. long and 0.6 mm. wide, rounded at the apex, finely white-pilose on the back toward the apex; staminate florets: sepals 3, stramineous, connate only at the very base, about 1 mm. long and 0.2 mm. wide, obtuse and slightly white-pilose on the back at the apex; petals 3, united into a whitish membranous tube about 1.7 mm. long, the free lobes about 0.2 mm. long; stamens 6; anthers brown; pistillate florets: sepals 3, hyaline, narrowly oblong, free, about 0.6 mm. long and 0.1 mm. wide, acute at the apex, glabrous throughout; petals 3, free, hyaline, narrowly oblong, about 0.8 mm. long and 0.1 mm. wide, subacute at the apex, glabrous; ovary subglobose, about 0.4 mm. long and wide, glabrous, 3-sulcate, 3-celled, 3-ovulate; style about 0.6 mm. long, glabrous; stigmas 3, about 0.4 mm. long.

The type of this distinct species was collected by H. Santapau and C. McCann (no. 1290) in a stream near Kive Mission at Khandala, Bombay, India, on November 7, 1942, and is deposited in the Britton Herbarium at the New York Botanical Garden. It is named in honor of Dr. H. Santapau in appreciation of his valued interest in this and other groups of Bombay plants and his kind cooperation with the writer's researches.

JUNELLIA ALATOCARPA (Troncoso) Moldenke, comb. nov.

Verbena alatocarpa Troncoso, Darwiniana 8: 485. 1949.

JUNELLIA TETRAGONOCALYX (Troncoso) Moldenke, comb. nov.

Verbena tetragonocalyx Troncoso, Darwiniana 8: 481--485. 1949.

LANTANA CORDATIBRACTEATA Moldenke, sp. nov.

Frutex; ramis ramulisque gracilibus obtuse tetragonis strigillosis; nodis subannulatis; intermediis abbreviatis; foliis oppositis; petiolis 1--3 mm. longis vel obsoletis densiuscule strigilloso-puberulis submarginatis; laminis chartaceis ovatis acutis, ad basin abrupte acuminatis, regulariter serrulatis (dentibus adpressis rotundatis revolutis), supra minute strigillosis scabridisque, subtus dense tomentellis.

Shrub; branches and branchlets apparently slender, obtusely tetragonal, very finely strigillose, more densely so on the youngest parts; nodes somewhat annulate; principal internodes apparently abbreviated, 0.5--2 cm. long; leaves decussate-opposite; petioles very slender, 1--3 mm. long or obsolete, rather densely strigillose-puberulent, slightly margined, flattened or subcanaliculate above; blades chartaceous, grayish-green above, much lighter beneath and often decidedly grayish there, ovate, 1.5--2.5 cm. long, 1--1.4 cm. wide, acute at apex, abruptly acuminate at the base, shallowly but regularly serrulate along the margins with appressed and rounded revolute margined teeth, microscopically strigillose and scabridous above, densely matted-puberulent or tomentellous with grayish hairs beneath; midrib very slender, slightly impressed above, prominent beneath; secondaries very slender, 3--5 per side, ascending, hardly at all arcuate, subimpressed above, prominent beneath; veinlet reticulation fine, abundant, subimpressed above, mostly obscured by the dense pubescence beneath; inflorescence axillary, in opposite pairs, approximately equaling the subtending leaves, 2--2.5 cm. long, erect-ascending; peduncles very slender, 14--18 mm. long, very finely strigillose; heads small, hemispheric, 1 cm. or less long and wide, many-flowered; bracts conspicuous, ovate, the outermost to 6 mm. long and 5 mm. wide, acute at the apex, cordate at the base, finely puberulent on both surfaces with appressed grayish hairs, venose; corolla-tube very slender, about 5 mm. long, densely puberulent on the outer surface, its limb about 3 mm. wide, densely puberulent on the outer surface.

The type of this species was collected by A. J. de Sampaio (no. 8204) at Campos along the side of the road from Atafona, Rio de Janeiro, Brazil, and is no. 46757 in the Herbarium of the Museu Nacional at Rio de Janeiro.

LIPPIA MULTIFLORA Moldenke, sp. nov.

Frutex; caulibus rarisque crassiusculis obtuse tetragonis parce adpresso-strigillosis plusminusve granulosis, saepe purpurascensibus canaliculatisque, non scabris; foliis plerumque ternatis; petiolis gracilibus adpresso-strigillosis granulosis plusminusve marginatis; laminis firme chartaceis rectis anguste ellipticis griseo-viridibus ad basin apicemque attenuato-acutis regulariter serrulatis, supra strigillosis non scabris vel minutissime scabrellis, subtus dense puberulis et resinoso-granulosis; inflorescentiis paniculato-aggregatis.

Shrub; stems and branches medium-slender or rather stoutish, obtusely tetragonal, sparsely appressed-strigillose and more or less granulate, not at all scabrous, often purplish, often canaliculate; nodes distinctly annulate; leaves whorled, mostly ternate; petioles slender, 2--5 mm. long, appressed-strigillose and granulate, more or less margined; blades firmly chartaceous, rather thick-textured and stiff, mostly erect, narrow-elliptic, 5.5--13 cm. long, 1--3.3 cm. wide, rather grayish-green, lighter beneath, attenuate-acute at both ends, uniformly serrulate from below the middle to the apex, strig-

illose on the upper surface with bulbous-based hairs but not at all or but very obscurely scabrous, densely puberulent and resinous-granulose beneath; midrib slender, plane or very slightly impressed above, prominent beneath; secondaries very slender, 10 or more per side, plane or very slightly impressed above, prominent beneath, ascending, slightly arcuate, terminating in the sinuses between the marginal teeth; vein and veinlet reticulation abundant, regular, occasionally slightly subimpressed above, subprominulous beneath; inflorescence aggregated at the tips of the stems and branches in paniculate fashion, often to 20 cm. long and 10 cm. wide; peduncles similar to the upper part of the stems or branches and continuous with them, similar in texture and pubescence, about 8 cm. long; inflorescence-branches slender, 2--8 cm. long, the lower ones longest and usually ternate in the axils of foliaceous bracts that are 2--3 cm. long and similar to the leaves in all other characters, the upper irregularly clustered in the axils of smaller and narrower bracts; spikes subcapitate in anthesis, becoming cylindrical-oblong and to 2 cm. long, congested on densely appressed-pubescent stalks 3--10 mm. long, densely many-flowered; lowermost bractlets broadly ovate, about 3 mm. long and 2 mm. wide, the upper ones obovate and somewhat smaller, all densely imbricate, short-acuminate at the apex, densely white-villosulous with appressed antrorse hairs on the back; flowers very small, the calyx densely spreading-hirsutulous, the corolla with an infundibular tube about 2 mm. long, very slender at the base, ampliate to 1 mm. at the apex, the slender portion glabrous, the expanded portion strigillose on the outer surface, the limb irregularly 2-lipped, the upper lip erect, about 1 mm. long, the lower lip 3-lobed, the lobes about 0.5 mm. long, ovate.

The type of this apparently widespread species was collected by Charles Barter (no. 768), probably in Northern Nigeria, while on Dr. Baikie's Niger Expedition between 1857 and 1859, and is deposited in the Torrey Herbarium at the New York Botanical Garden. I am indebted to my colleague, R. D. Meikle, of Kew, for pointing out to me the differences between this species and *L. rugosa* A. Chev., with which it had previously been confused by me.

PAEPALANTHUS TESSMANNII Moldenke, sp. nov.

Herba; caule valde abbreviatis; foliis plusminusve rosulatis graminoidis acutis multinerviatis utrinque glabris non fenestris; vaginis elongatis subadpressis glabris apicem versus ampliatis et oblique fissis; pedunculis ca. 6 gracilibus 5-costatis complanatis tortis glabris; capitulis subglobosis albis; bracteolis involucri brunneis oblongo-oblaeolatis acutis ciliato-marginatis; receptaculo dense longeque villosis.

Herb; stems greatly abbreviated, 2--3 cm. long; leaves more or less rosulate, grass-like, uniformly bright-green and shiny on both surfaces, mostly 4--6 cm. long, 6--7 mm. wide at the mid-point, acute at apex, many-nerved, not fenestrate, glabrous on both surfaces; sheaths surpassing the leaves, about 7 cm.

long, rather close, more ampliate and obliquely split above, glabrous; peduncles about 6 per plant, slender, 32--50 cm. tall, 5-costate, flattened in drying, twisted, glabrous; heads subglobose, white, 7--8 mm. in diameter; involucreal bractlets brownish, oblong-oblancoelate, about 3 mm. long and 1 mm. wide, acute at the apex, irregularly ciliate-margined, otherwise glabrous; receptacle densely long-villous; receptacular bractlets stramineous, narrowly oblong-spatulate, about 2.2 mm. long and 0.4 mm. wide, glabrous except for the dense tuft of erect white hairs at the apex; staminate florets: sepals 3, white, obovate, connate only at the base, the free portion about 1.7 mm. long and 0.4 mm. wide, glabrous except for the densely barbellate apex; petals united into a slender membranous brownish tube about 0.8 mm. long, 3-lobed at the apex; stamens 3, exerted from the corolla; filaments about 0.2 mm. long, white; anthers oblong, yellow; pistillate florets: sepals 3, whitish, oblancoelate-spatulate, connate only at the very base, about 2.1 mm. long and 0.5 mm. wide, obtuse at the apex, glabrous except for the densely barbellate apex; petals 3, free, subhyaline, obovate-spatulate, about 1.3 mm. long and 0.4 mm. wide, long-villous from the middle to the apex on the back; ovary 3-celled, 3-sulcate, 3-ovulate, glabrous, about 0.4 mm. long and wide; style glabrous, about 0.6 mm. long, its 3 appendages about 0.8 mm. long; stigmas 3, about 0.8 mm. long.

The type of this species was collected by Günter Tessmann (no. 3781) -- in whose honor it is named -- in wet places between tufts of grass on the campo at Piraquara, about 22 km. east of Curitiba, Paraná, Brazil, on January 15, 1949, and is deposited in the Britton Herbarium at the New York Botanical Garden.

PAEPALANTHUS VIGIENSIS Moldenke, sp. nov.

Herba caulescens; caulibus gracilibus rectis foliosis ad apicem longe villosis; foliis linearibus firmis obtusis, in statu senectute glabrescentibus, in statu juventute plusminusve longe pilosis, supra subcanaliculatis, non fenestratis; vaginis arcte adpressis glabrescentibus, ad apicem oblique fissis et longe villosis; pedunculis filiformibus 5 vel 6 bicostatis stramineis plusminusve pilosis vel glabrescentibus tortis; capitulis hemisphaericis vel subglobois; bracteis involucri brunneis firmis late elliptico-obovatis glabris acutis vel rotundatis; receptaculo dense longeque villoso.

Caulescent herb; stems slender, to 4 cm. long, erect, leafy, long-villous at the summit; leaves linear, rather firm, 6--8 mm. long, less than 1 mm. wide at the mid-point, blunt at the apex, more or less long-pilose when young, glabrescent in age, uniformly green on both surfaces, slightly canaliculate on the upper surface, not fenestrate; sheaths closely appressed, about 1 cm. long, glabrescent except for the obliquely split long-villous apex, the blade short, ascending, about 2 mm. long; peduncles filiform, 5 or 6 per stem, borne at the apex of the stem, 2-costate, more or less pilose or glabrescent, stramineous, twisted; heads hemispheric or subglobose, about 3

mm. in diameter; involucrel bractlets brownish, firm, broadly elliptic-ovate, about 1.3 mm. long and 0.8 mm. wide, acute or rounded at the apex, glabrous; receptacle densely long-villous; receptacular bractlets oblong, stramineous, about 1 mm. long, acute at the apex, tufted-villous at the apex; staminate florets: sepals 3, connate only at the very base, brown, obovate, about 0.8 mm. long and 0.4 mm. wide, rounded at the apex, glabrous except for a very few short hairs at the very apex; petals 3, united into a brownish membranous tube about 0.8 mm. long, glabrous; stamens 3; pistillate florets not seen.

The type of this species was collected by J. Murça Pires (no. 1398) on the campina at Vigia, Pará, Brazil, on November 17, 1948, and is deposited in the Britton Herbarium at the New York Botanical Garden. Although the major part of an entire head of flowers was dissected, no pistillate florets were discovered.

PAEPALANTHUS VILLIPES Moldenke, sp. nov.

Herba caulescens saepe multiramosa; caulibus gracilibus ubique foliosis densiuscule longeque villosis; ramis plerumque brevibus dense foliosis et longe villosis; foliis linearibus plerumque recurvatis, ad basin ampliato-amplectentibus, ad apicem obtusis, supra canaliculatis, basin versus multinerviatis, non fenestratis, in statu juventute plusminusve villosis, in statu senectute glabris, basin versus ciliato-marginatis; vaginis arcte adpressis ubique laxe villosis, ad apicem oblique fissis; pedunculis filiformibus stramineis 2-costatis basin versus densissime albido-villosis, apicem versus glabrescentibus paulo tortis; capitulis hemisphaericis griseo-albidis; bracteolis involucri atrobrownis rhomboideis glabris breviter acuminatis; receptaculo dense longeque villoso.

Caulescent often many-branched herb; stems slender, 5--6 cm. long, often bearing a whorl of branches at its apex, leafy throughout, rather densely long-villous; branches mostly short, to 2 cm. long, densely leafy and long-villous; leaves linear, ampliate-sheathing at the base, uniformly green on both surfaces, 1.3--2 cm. long, 1 mm. wide or less at the mid-point, usually recurved, blunt at the apex, canaliculate on the upper surface, many-nerved toward the base beneath, not fenestrate, more or less scattered-villous when young, glabrous in age, more or less villous-ciliate along the margins toward the base; sheaths closely adpressed, 1--1.2 cm. long, loosely villous throughout, obliquely split at the apex, the blade short, erect, lanceolate, acute; peduncles filiform, 3--5 or more per branch, stramineous, 5--13 cm. long, very densely villous with white, ascending, rather loose hairs on the lower half, glabrescent toward the apex, 2-costate, slightly twisted; heads hemispheric, about 4 mm. in diameter, grayish-white; involucrel bractlets dark-brown, rhomboid, about 0.9 mm. long and 0.5 mm. wide, short-acuminate at the apex, glabrous; receptacle densely long-villous; receptacular bractlets oblong-spatulate, brown, about 0.9 mm. long and 0.6 mm. wide, concave-cucullate, rounded at the apex, long-pilose on the back; staminate florets: sepals

3, brownish, broadly elliptic-obovate, concave-navicular and enfolding the rest of the floret, free except for the very base, about 0.8 mm. long and 0.5 mm. wide, subacute at the apex and there densely barbellate on the back; petals 3, united into a whitish membranous tube about 0.4 mm. long, 3-lobed at the apex; stamens 3; anthers large, yellow; pistillate florets: sepals 3, free, hyaline, oblong, about 1.5 mm. long and 0.2 mm. wide, subacute at the apex, glabrous; petals 3, free, obovate-spatulate, concave-cucullate at the apex and enveloping the pistil, subhyaline, about 1.3 mm. long and 0.3 mm. wide, rounded and densely barbellate at the apex; ovary elongate-elliptic, about 0.8 mm. long and 0.4 mm. wide, glabrous, not plainly sulcate; style stout, short, about 0.4 mm. long, glabrous; stigmas 3, about 0.2 mm. long.

The type of this species was collected by G. A. Black (no. 48-3278) in barrancas at Vigia, in the region of Campina do Palha, Pará, Brazil, on September 30, 1948, and is deposited in the Britton Herbarium at the New York Botanical Garden. The collector describes the species as a low perennial, common in barrancas. It appears to be related to P. Jahni Ruhl., but differs conspicuously in the pubescence of its leaves and peduncles.

PREMNA MICROPHYLLA var. **LUXURIANS** (Nakai) Moldenke, comb. nov.
Premna luxurians Nakai, Rep. Veg. Is. Sikasima Iyo 37. 1927.

PRIVA BOLIVIANA Moldenke, sp. nov.

Herba; caulibus gracilibus tetragonis sulcatis pilosis glabrescentibus multiramosis; ramis rectis vel adscendentibus gracilibus obtuse tetragonis sulcatis densiuscule uncinato-pilosis; foliis oppositis; petiolis gracillimis dense uncinato-pilosis; foliis membranaceis ovatis acutis serratis, ad basin subtruncatis vel abrupte acuminatis, supra plusminusve pilosis, subtus densiuscule puberulis et parce resinoso-glandulosis; coccis scrobiculatis glabris non armatis.

Herb, 40--80 cm. tall; stems slender, quadrangular, sulcate between the angles, pilose or glabrescent in age, abundantly branched; branches erect or ascending, slender, obtusely tetragonal, sulcate (in drying) between the angles, rather densely uncinato-pilose; nodes somewhat flattened, not conspicuously ampliate, not annulate; principal internodes 5--8 cm. long; leaves decussate-opposite; petioles very slender, 1--2 cm. long, densely uncinato-pilose; blades membranous, somewhat lighter green beneath, ovate, 3--6 cm. long, 2--4.2 cm. wide, acute at the apex, rather coarsely serrate from near the base to the apex with rounded teeth, subtruncate or abruptly acuminate at the base, more or less pilose above with hairs of various lengths (the larger ones bulbous-based), more densely puberulent and slightly resinous-glandular beneath; midrib very slender, plane above, subprominent beneath; secondaries about 5 per side, very slender, ascending, hardly arcuate, often several issuing from the base of the blade; tertiaries obscure or indiscernible above, slightly prominulous beneath; inflores-

cence axillary, elongate, racemose, 8--20 cm. long, with rather distant flowers and fruits; peduncles erect or ascending, 1--2 cm. long, acutely or obtusely tetragonal, uncinatè-pilose; rachis acutely tetragonal, densely uncinatè-pilose; pedicels filiform, about 1 mm. long, densely uncinatè-puberulent; calyx about 2.5 mm. long, densely uncinatè-puberulent and with scattered longer straight hairs on the ribs; corolla violet; cocci 3 mm. long, scrobiculate but totally unarmed, glabrous.

The type of this distinct species was collected by Ismael Peredo at Las Juntas, at an altitude of about 350 m., Santa Cruz, Bolivia, on January 29, 1947, and is deposited in the Britton Herbarium at the New York Botanical Garden.

STACHYTARPHETA FROESII Moldenke, sp. nov.

Suffrutex lignosus multiramis; ramis graciliusculis obtuse totragonis densissime lanato-tomentosis; foliis oppositis; petiolis percassis vel obsolete densissime sordido-lanatis; laminis firme coriaceis obovatis, ad apicem rotundatis, ad basin cuneato-attenuatis, ultra mediam breviter dentatis revolutis, supra subbullatis, in statu juventute utrinque dense lanato-tomentosis, in statu senectute supra glabris nitidisque, subtus dense sordido-lanatis.

Woody subshrub, abundantly branched; branches rather slender and obtusely tetragonal, very densely lanate-tomentose with sordid hairs; nodes not visibly annulate; principal internodes 1--2.5 cm. long; leaves decussate-opposite, abundant near the tips of the branches; petioles very heavy and thick, to 5 mm. long or obsolete, very densely sordid-lanate; blades firmly coriaceous, dark-green and very shiny above, sordid beneath, obovate, 2--4 cm. long, 2--3.8 cm. wide, rounded at the apex, cuneately attenuate into the petiole at the base, uniformly short-dentate from the widest part to the apex with obtuse or rounded teeth, revolute-margined, subbullate in drying above, densely lanate-tomentose on both surfaces when young, becoming glabrous above in age, permanently densely sordid-lanate beneath; midrib slender, somewhat impressed above, obscured by the tomentum beneath; secondaries very slender, 5 or more per side, regular, close together and subparallel, ascending, hardly at all arcuate, somewhat impressed above (in drying), hidden by the tomentum beneath; tertiaries regular, abundant, straight, subparallel, issuing at right angles from the secondaries and connecting them, somewhat impressed above (in drying), hidden by the tomentum beneath; inflorescence apparently terminal; spikes very short and dense, apparently only 2--3 cm. long and 2 cm. wide before and during anthesis, densely lanate, sessile or subsessile; rachis, bractlets, and calyx apparently densely sordid-villous; flowers not in condition for description, but the pistil about 1 cm. long, the stigma capitate.

The type of this species was collected by R. de Lemos Fróes (no. 20140) -- in whose honor it is named -- in "campos gerais" between Sincorá and Mucugê, Bahia, Brazil, on February 19, 1943, and is deposited in the Britton Herbarium at the New York Botanical Garden.

SYNGONANTHUS BALDWINI Moldenke, sp. nov.

Herba minuta; caulibus obsoletis vel perabbreviatis ad apicem dense longeque pilosis; foliis numerosis dense rosulatis rectis linearibus fimbriatis attenuato-acutis non fenestratis, in statu juventute plusminusve sordido-pilosis et ad basin dense pilosis, in statu senectute utrinque glabrescentibus; vaginis arcte adpressis glabris, ad apicem oblique fissis; pedunculis 1--3 filiformibus 2- vel 3-costatis debilibus paulo tortis glabris; capitulis subglobosis albis; receptaculo villosa.

Tiny herb; stems obsolete or much abbreviated, densely long-pilose at the apex; leaves numerous, densely rosulate, erect, uniformly bright-green on both surfaces, linear, firm, 5--10 mm. long, about 0.5 mm. wide (or less) at the mid-point, attenuate-acute at the apex, glabrescent on both surfaces when mature, more or less sordid-pilose when young and rather densely pilose at the very base, not fenestrate, the venation indiscernible; sheaths closely appressed, about 5 mm. long, glabrous, obliquely split at the apex, the blade short, erect, appressed; peduncles 1--3 per plant, filiform, 1.5--2 cm. long, 2- or 3-costate, slightly twisted, weak, glabrous or practically so; heads subglobose, white, 3--3.5 mm. in diameter; receptacle densely long-villous; receptacular bractlets hyaline, elliptic, about 1.3 mm. long and 0.4 mm. wide, rounded at the apex, glabrous on both surfaces, slightly concave; staminate florets: sepals 3, free and separate, hyaline, oblanceolate-spatulate, about 1.3 mm. long and 0.4 mm. wide, rounded at the apex, attenuate-narrowed at the base, glabrous; petals 3, united into a pale-stramineous tube about 1 mm. long, ampliate at the apex and surmounted by 3 triangular-ovate, erect, rather firm lobes; stamens 3; pistillate florets: sepals 3, free and separate, narrow-oblong or spatulate, hyaline, about 1.3 mm. long and 0.2 mm. wide, obtuse at the apex, glabrous; petals 3, connate at the middle into a stramineous tube about 1.3 mm. long, free at the base, surmounted by 3 triangular-ovate erect lobes about 0.6 mm. long and wide, glabrous throughout; ovary subglobose, about 0.4 mm. long and wide, glabrous, 3-sulcate, 3-celled, 3-ovulate.

The type of this very diminutive species was collected by J. T. Baldwin (no. 3479) -- in whose honor it is named -- on the Rio Negro, at the mouth of the Rio Uaupés, Amazonas, Brazil, on February 24, 1944, and is deposited in the Britton Herbarium at the New York Botanical Garden. The species is apparently closely related to S. amazonicus Moldenke.

SYNGONANTHUS BELLUS Moldenke, sp. nov.

Herba caulescens; caulibus solitariis rectis densiuscule glanduloso-pubescentibus; foliis basalibus rosulatis numerosis linearibus acutis utrinque glabris; foliis caulibus brevioribus plusminusve patente pilosis erecto-adscendentibus verticillatis; inflorescentiis umbellatis terminalibus involucratis; bracteis foliaceis dense patenteque pilosis, pilis plerumque glanduliferis; vaginis dense patenteque pilosis; pedunculis dense umbellatis filiformibus dense patenteque pilosis (pilis

glanduliferis) obsolete costatis non tortis; capitulis obconicis albis; bracteolis involucri conspicuis lanceolatis vel ellipticis attenuato-acutis glabris vel parce pilosis.

Caulescent herb; stems single, erect, to 9.5 cm. tall, rather densely glandular-pubescent with more or less contorted grayish spreading hairs which become appressed-matted in age; leaves basal and cauline, the basal ones rosulate, numerous, linear, about 1 cm. long or less, about 0.3 mm. wide at the mid-point, acute at the apex, glabrous on both surfaces, not plainly canaliculate nor striate, the cauline ones similar but shorter and more or less spreading-pilose, borne in 5 or 6 whorls 6--20 mm. apart on the stem, erect-ascending; inflorescences borne in a terminal umbel subtended by an involucre of leaf-like densely spreading-pilose bracts, the hairs mostly gland-tipped; sheaths closely appressed, about 1 cm. long, densely spreading-pilose, obliquely split at the apex, the blade erect, lanceolate, 2--3 mm. long; peduncles 16--85 per umbel, radiating to form a hemispheric or almost globose umbel 4--6 cm. in diameter, filiform, 1--3 cm. long, densely spreading-pilose throughout with brownish gland-tipped hairs, obsoletely ribbed, not twisted; heads obconic, white, 2--3 mm. long and wide; outer involucreal bractlets small, lanceolate, subhyaline, about 1.5 mm. long and 0.5 mm. wide, attenuate to the sharp apex, glabrous, the inner ones large, conspicuous, elliptic, about 2.5 mm. long and 1 mm. wide, attenuate-acute at the apex, finely pilose on the back; receptacle long-villous; receptacular bractlets narrow-elliptic, hyaline, about 2 mm. long, attenuate at both ends, appressed-pilose on the back; staminate florets: sepals 3, hyaline, free, narrow-elliptic, about 1.3 mm. long, acute at the apex, long-pilose on the back; petals 3, connate into an infundibular stramineous tube, the apiculate portion about 0.8 mm. long and 1.3 mm. in diameter, firmly spreading, glabrous; stamens 3, equaling the corolla; pistillate florets: sepals 3, free, linear, hyaline, about 2 mm. long and 0.2 mm. wide, finely pilose but usually covered by equally long receptacular hairs; petals 3, connate at the middle, free at the apex and base, hyaline, about 2 mm. long, glabrous; ovary very small; style abbreviated.

The type of this distinct species was collected by J. Murgu Piñes (no. 1397) on the campina at Vigia, Pará, Brazil, on November 17, 1948, and is deposited in the Britton Herbarium at the New York Botanical Garden.

SYNGONANTHUS NANUS Moldenke, sp. nov.

Herba acaulescens; foliis rosulatis graminoidis membranaceis acutis glabris vel paucissime pilosis obscure fenestatis; vaginis perlxaxis rectis complanatis multicostatis dense patentique fulvo-villosis; pedunculis ca. 5 stramineis glabris obscure costatis; capitulis albidis obconicis; bracteolis involucri aureo-stramineis permitidis late ellipticis obtusis glabris rigidulis.

Acaulescent herb; leaves basal, rosulate, grass-like, membranous, uniformly green on both surfaces, 1.5--3 cm. long,

acute at the apex, glabrate or with a very few scattered elongate hairs, microscopically fenestrate throughout on both surfaces, 3--3.5 mm. wide at the mid-point; sheaths very lax, 3--4 cm. long, erect, straight, flattened in drying, many-ribbed, densely spreading-villous with fulvous hairs; peduncles about 5 per plant, 2--5 cm. long [when immature?], stramineous, glabrous, not plainly costate; heads whitish, obconic, 2.5--3 mm. long and wide [when immature]; involucrel bractlets stramineous with a golden tinge, very shiny, broadly elliptic, about 2.5 mm. long and 1.5 mm. wide, blunt at the apex, glabrous on both surfaces, firm-textured, rather stiff, translucent except for the conic basal portion which is opaque; flowers too immature for accurate description.

The type of this species was collected by Coccoatto (no. 118) at Palmeira, Paraná, Brazil, in December, 1936, and is no. 3230 in the herbarium of the Museo Paranaense. It is deposited in the Britton Herbarium at the New York Botanical Garden. Although the type is too immature to permit accurate description of the florets, the habitual and vegetative characters of the plant are so distinct as to leave little doubt that it represents a new species. It is to be hoped that new and better material may soon be forthcoming.

VERBENA INCISA f. **ALBIFLORA** Osten & Moldenke, f. nov.

Hæc forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having white corollas.

The type was collected by Teodoro Meyer (no. 518, in part) at Fontana, Chaco, Argentina, in October, 1931, and is deposited in the Osten Herbarium at the Museo de Historia Natural at Montevideo.

VERBENA INTERMEDIA f. **ALBIFLORA** Moldenke, f. nov.

Hæc forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having white corollas.

The type was collected by Arturo Burkart (no. 4179) in xerophilous woods on the steppe at Chaleguaychú, Entre Ríos, Argentina, on January 5, 1932, and is deposited in the Osten Herbarium at the Museo de Historia Natural at Montevideo.

VERBENA LILLOANA Moldenke, sp. nov.

Herba; caulibus gracilibus obtuse tetragonis sæpe canaliculatis minute pilosulis vel subglabrescentibus; foliis oppositis; petiolis gracilibus plusminusve marginatis minute pilosulis vel glabrescentibus; laminis submembranaceis ovatis plusminusve tripartitis profunde inciso-lobatis utrinque minutissime pilosulis vel glabrescentibus, lobis majoribus ad apicem dentatis; inflorescentiis terminalibus densifloris spicatis.

Herb; stems slender, obtusely tetragonal, often canaliculate between the angles, minutely pilosulous or subglabrescent; nodes obscurely annulate with a band of denser hairs; principal internodes 6.5--7 cm. long; leaves decussate-opposite, usually

with abbreviated branchlets in their axils; petioles slender, 1--2 cm. long, more or less margined, minutely pilosulous or glabrescent; blades submembranous, uniformly green on both surfaces, ovate in outline, 3--5 cm. long, 1.5--4 cm. wide, more or less tripartite, each division deeply incised-lobed, the larger lobes toothed near their apex, very minutely scattered-pilosulous on both surfaces or glabrescent; midrib and the 4 pairs of secondaries very slender, plane above, flattened beneath; veinlet reticulation very sparse and inconspicuous on both surfaces; inflorescence terminal, solitary; peduncles elongated, about 9 cm. long, minutely pilosulous with scattered short hairs or glabrescent; spikes dense-flowered except for the lowest 2 or 4 flowers which are widely separated (at least after anthesis); bractlets lanceolate, about 7 mm. long, long-attenuate at the apex, somewhat ciliate-margined, otherwise glabrate; calyx-tube about 7 mm. long, pilosulous-puberulent, surmounted by 5 unequal apiculate teeth about 2 mm. long; corolla-tube about 7 mm. long, obscurely appressed-pilosulous on the outside, the limb about 6 mm. in diameter, the larger lobes asymmetrically emarginate.

The type of this species was collected by S. Venturi (no. 4607) at Las Panas, at an altitude of 3000 m., dept. Chicligasta, Tucumán, Argentina, on November 22, 1926, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VERBENA PLATENSIS f. **VIOLACEA** Moldenke, f. nov.

Haec forma a forma typica speciei corollis violaceis recedit. This form differs from the typical form of the species in having its corollas violet in color.

The type was collected by Cornelio Osten (no. 3195) at Arroyo Grande, Tala, dept. Soriano, Uruguay, on October 3, 1895, and is deposited in the Osten Herbarium at the Museo de Historia Natural at Montevideo.

VERBENA SCHULZII Moldenke, sp. nov.

Herba; caulibus ramisque acute tetragonis fistulosis breviter patentique piloso-pubescentibus, pilis albidis vel sordidis; foliis oppositis sessilibus; laminis chartaceis lanceolatis acutis argute irregulariterque serratis, ad basin paulo amplexicaulis, supra scaberrimis, subtus scabridis et parce pilosis; inflorescentiis terminalibus spicatis dense multifloris.

Herb 30--40 cm. tall; stems and branches acutely tetragonal, hollow, pilose-pubescent with short spreading hairs, somewhat less so in age, the hairs whitish or sordid; nodes annulate; principal internodes 2.5--7 cm. long; leaves decussate-opposite and sessile; blades chartaceous, uniformly bright-green on both surfaces, lanceolate, 2.5--6 cm. long, 6--12 mm. wide, acute (or the upper only somewhat attenuate-acute) at the apex, somewhat clasping at the base, sharply and rather irregularly serrate along the margins, very scabrous above, scabridous and rather sparsely pilose beneath, especially along the larger veins; midrib slender, somewhat impressed above, prominent beneath; secondaries very slender, 6 or more per side, somewhat

impressed above, sharply prominent beneath, ascending, slightly arcuate; veinlet reticulation rather obscure on both surfaces; inflorescence terminal, spicate; peduncles acutely tetragonal, 9--12 cm. long, rather abundantly spreading-pilose with stiff white hairs standing at right angles to the peduncle; spikes 5.5--8 cm. long, densely many-flowered; bractlets lanceolate-ovate, 5--7 mm. long, attenuate-acuminate, 1--1.5 mm. wide at the base, rather abundantly whitish-pubescent on the back and densely long-ciliate on the margins; calyx tubular, about 1 cm. long, 5-costate, abundantly white-pilose; corolla-tube bright-rose, about 12 mm. long, densely pubescent on the outside above the calyx, its limb about 6 mm. in diameter.

The type of this species was collected by A. G. Schulz (no. 284) -- in whose honor it is named -- in swampy ground on a low campo at Colonia Benitez, Chaco, Argentina, on December 7, 1933, and is deposited in the Osten Herbarium at the Museo de Historia Natural at Montevideo.

VERBENA THYMOIDES f. **ALBIFLORA** Moldenke, f. nov.

Hæc forma a forma typica speciei corollis albis recedit.

This form differs from the typical form of the species in having white corollas.

The type was collected by José Arechavaleta at Cerro de Nico Perez and Sierra de Tapambai, dept. Minas, Uruguay, in November or December, 1892, and is deposited in the Osten Herbarium at the Museo de Historia Natural at Montevideo.

VITEX TRIFOLIA var. **HETEROPHYLLA** (Mak.) Moldenke, comb. nov.

Vitex rotundifolia var. heterophylla Mak., Ill. Fl. Nipp. 186. 1940.

ADDITIONAL NOTES ON THE ERIOCAULACEAE. III

Harold N. Moldenke

The present notes are supplementary to the material contained in my booklets entitled "The known geographic distribution of the members of the Eriocaulaceae, together with a check-list of scientific names proposed in this group" (62 pp., 1942), "The known geographic distribution of the members of the Verbenaceae, Avicenniaceae, Stilbaceae, Symphoremaceae, and Eriocaulaceae" (215 pp., 1949), and "A list showing the location of the principal collections of Verbenaceae, Avicenniaceae, Stilbaceae, Symphoremaceae, and Eriocaulaceae. Supplement 1" (29 pp., 1947) and my publications on members of this family in N. Am. Fl. 19: 17--50 (1937); Brittonia 3: 157--159 (1939); Lloydia 2: 170 (1939); Carnegie Inst. Wash. Publ. 522: 137--223 (1940); Lundell, Fl. Texas 3↓: 1--89 (1942); Wrightia 1: 220--246 (1948); Ann. Mo. Bot. Gard. 27: 268--269 (1940), 28: 411